

In The Matter Of: )  
 )  
McColl Superfund Site, Fullerton, California )  
 )  
Shell Oil Company, ) U.S. EPA  
Union Oil Company of California, ) Docket No. 96-10  
Atlantic Richfield Company, and )  
Texaco, Inc., )  
 )  
Respondents. )  
 )  
Proceeding Under Section 106(a) of the )  
Comprehensive Environmental Response, )  
Compensation, and Liability Act of 1980, )  
as amended (42 U.S.C. § 9606(a)). )

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1 ADMINISTRATIVE ORDER  
2 FOR REMEDIAL DESIGN AND REMEDIAL ACTIONS

3 I. INTRODUCTION AND JURISDICTION

4 1. This Order directs Shell Oil Company, Union Oil Company of  
5 California, Atlantic Richfield Company, and Texaco, Inc.  
6 (hereinafter "Respondents") to perform a remedial design for the  
7 remedy described in the Record of Decision ("ROD") for the  
8 Groundwater Operable Unit (dated May 15, 1996) (hereinafter  
9 "Groundwater ROD") for the McColl Superfund Site ("the Site"). In  
10 addition, this Order directs Respondents to implement the design  
11 performed under Unilateral Administrative Order (UAO) 93-21 issued  
12 July 8, 1993, as amended, for the Source Soils Operable Unit  
13 (hereinafter "Source ROD"), attached to this Order as Attachment 1,  
14 and the remedial design for the Groundwater ROD required herein, by  
15 performing the remedial actions set forth in both the Groundwater  
16 ROD and the Source ROD. The Source ROD is attached to this Order  
17 as Attachment 2 and is incorporated herein by reference. The  
18 Groundwater ROD is also attached to this Order as Attachment 3.  
19 This Order is issued to Respondents by the United States  
20 Environmental Protection Agency ("EPA") under the authority vested  
21 in the President of the United States by section 106(a) of the  
22 Comprehensive Environmental Response, Compensation, and Liability  
23 Act of 1980, as amended ("CERCLA"), 42 U.S.C. § 9606(a). This  
24 authority was delegated to the Administrator of EPA on January 23,  
25 1987, by Executive Order 12580 (52 Fed. Reg. 2926, January 29,  
26 1987), and was further delegated to EPA Regional Administrators on  
27 September 13, 1987 by EPA Delegation No. 14-14-B. This authority  
28 was further delegated to the Director, Hazardous Waste Management  
29 Division, EPA Region 9 by Order R1290.43, dated October 26, 1988.

30 2. All documents submitted to EPA by the Respondents pursuant to  
31 this Order, or attachments thereto, and approved by EPA shall be  
32 incorporated into this Order as a requirement of this Order and

1 shall be an enforceable part of this Order. The Work performed by  
2 the Respondents pursuant to this Order shall, at a minimum, comply  
3 with the Statement of Work ("SOW") attached to this Order as  
4 Attachment 4, and shall be consistent with the Groundwater and  
5 Source RODs.

## 6 II. BACKGROUND AND FINDINGS OF FACT

7 3. The twenty-two acre McColl Superfund Site ("Site") is located  
8 in Fullerton, Orange County, California, approximately 25 miles  
9 southeast of Los Angeles. Housing developments border the Site to  
10 the east and south. Developed but open areas of a golf course and  
11 a regional park border the Site to the west. An oil field occupies  
12 an open area to the north.

13 4. There are no active facility processes at the Site. The Site  
14 contains twelve large unlined pits, called sumps, filled with  
15 refinery wastes placed there in the 1940's. The sumps have been  
16 periodically covered since then with drilling muds and fill  
17 materials. There are an estimated 100,000 cubic yards of waste and  
18 contaminated materials at the Site. The Source ROD and the  
19 Groundwater ROD contain more detailed descriptions of the Site.

20 5. A groundwater aquifer underlies the Site. The present  
21 horizontal groundwater flow is towards the southwest. The aquifer  
22 downgradient of the Site is used as a drinking water source by  
23 residents of the City of Fullerton. Depth to groundwater at the  
24 Site is approximately 250 feet.

25 6. The Site was included on the EPA National Priority List in  
26 September 1982, pursuant to Section 105 of CERCLA, 42 U.S.C.  
27 Section 9605. See 40 C.F.R., Part 300, App. B.

28 7. To fully study and undertake response activities, EPA divided  
29 the Site into operable units. The operable units for the Site  
30 address the sump areas (i.e., source areas) and groundwater. This  
31 Order addresses both operable units.

32 8. EPA has undertaken various response actions at the Site.  
33 Following a remedial investigation and feasibility study by  
34 Respondents, EPA selected an excavation and redisposal remedy to

1 address the source areas in 1984. The State of California  
2 ("State") was designated the lead agency for the Site but was later  
3 enjoined by a state court from implementing the remedy. EPA  
4 undertook additional feasibility study work at the Site, and,  
5 having assumed the lead in 1989, proposed an incineration remedy.  
6 Following public comment and field testing on the proposed  
7 incineration remedy, EPA reevaluated remedial alternatives.

8 9. In August 1992, pursuant to Section 117 of CERCLA, 42 U.S.C.  
9 9617, EPA published its updated feasibility study, called the  
10 Supplemental Reevaluation of Alternatives II, and issued a proposed  
11 plan identifying soft-material solidification as the preferred  
12 remedy for the source areas. This proposed plan also identified  
13 installation of a Resource Conservation and Recovery Act (RCRA)  
14 equivalent closure system as a contingency remedy in the event that  
15 soft-material solidification was determined not to be feasible.  
16 EPA, following extensive performance testing of soft-material  
17 solidification, selected the contingency remedy of a RCRA  
18 equivalent closure on September 28, 1995.

19 10. The contingency remedy selected by EPA requires that a RCRA  
20 equivalent closure be implemented. Specifically, the contingency  
21 remedy for the source areas includes the following: (1)  
22 constructing a multilayer cap over the untreated sumps with a gas  
23 collection and treatment system to prevent infiltration of water  
24 and release of hazardous air emissions; (2) building subsurface  
25 slurry walls around the sumps to prevent migration of water into  
26 the waste and outward migration of contaminants; (3) stabilizing  
27 steep slopes on the Site with retaining walls; and (4) conducting  
28 groundwater monitoring. Operations and maintenance for the source  
29 remedy will be necessary at the Site, which will include monitoring  
30 and maintenance of the cap and slurry wall, as well as site  
31 security and routine site maintenance. These requirements are  
32 embodied in the Source ROD executed on June 30, 1993, and the Task  
33 4 Full-Scale Demonstration Test Report of July 1995, both of which  
34 the State had a reasonable opportunity to review and comment. The  
35 Source ROD and the Task 4 Full-Scale Demonstration Test Report are

1 supported by an administrative record that contains the documents  
2 and information upon which EPA based the selection of both the  
3 preferred and contingency remedy. From September 1993, to April  
4 1996, Respondents, under EPA's oversight, undertook a Remedial  
5 Investigation and Feasibility Study ("RI/FS") for the groundwater  
6 operable unit, pursuant to CERCLA and the National Contingency  
7 Plan, 40 C.F.R. Part 300.

8 11. Pursuant to section 117 of CERCLA, 42 U.S.C. § 9617, EPA  
9 published notice of the completion of the Groundwater FS and of the  
10 proposed plan for remedial action on February 15, 1996, and  
11 provided opportunity for public comment on the proposed remedial  
12 action.

13 12. EPA's decision to select infiltration controls with long-term  
14 monitoring for the groundwater remedy is embodied in the  
15 Groundwater ROD executed on May 15, 1996, which the State had a  
16 reasonable opportunity to review and comment. The Groundwater ROD  
17 is supported by an administrative record that contains the  
18 documents and information upon which EPA based the selection of the  
19 groundwater remedy. The administrative record was made available  
20 to the public at the time of the issuance of the proposed plan in  
21 March 1996.

22 13. EPA and the State have undertaken response actions at the  
23 Site, including ongoing site maintenance, site security, and  
24 oversight of actions taken by Respondents.

25 14. On May 23, 1990, EPA issued to Respondents and Phillips  
26 Petroleum, Inc., Unilateral Administrative Order No. 90-12 for  
27 Partial Remedial Investigation and Response Actions, which  
28 required, among other things, the Respondents to conduct response  
29 actions related to the groundwater. This Order was superseded by  
30 Unilateral Administrative Order No. 93-21 ("Order No. 93-21") which  
31 rendered Unilateral Administrative Order No. 90-12 null and void.

32 15. On July 8, 1993, EPA issued to the Respondents Order 93-21  
33 which required that the Respondents perform soft material  
34 solidification tests, begin preliminary design of the  
35 solidification process and closure of the sumps, and perform the

1 groundwater remedial investigation and feasibility study.

2 16. On September 28, 1995, concurrent with the selection of the  
3 contingency remedy of closure without solidification, EPA amended  
4 Order No. 93-21 by issuing a revised statement of work. EPA  
5 selected the contingency remedy based upon significant community  
6 opposition and unanticipated technical complexities which would  
7 have likely led to further delays in implementation. This  
8 amendment directed the Respondents to proceed to final design of  
9 the RCRA equivalent closure system for the source. The design of  
10 the closure system is ongoing and Order No. 93-21 is still in  
11 effect and shall remain in effect until the final source design  
12 deliverables are approved.

13 17. The waste at the Site has a pH of less than 2. In addition,  
14 the waste contains various organic compounds including benzene,  
15 toluene and xylene, inorganic chemicals including arsenic and  
16 chromium, and high levels of sulfur compounds including sulfur  
17 dioxide. The principal threats at the Site include the inhalation  
18 of benzene and sulfur dioxide, and the ingestion of arsenic.

19 18. The Site, which is located on two parcels, contains twelve  
20 unlined sumps. One parcel is referred to as the "Ramparts" area  
21 and the other the "Los Coyotes" area. Each area contains six of  
22 the twelve sumps. All sumps contain large volumes of the hazardous  
23 organic and inorganic compounds. The waste material contained  
24 within the sumps occurs as somewhat distinct types, segregated by  
25 depth. These types are considered distinct based on their physical  
26 characteristics (properties). The largest waste fraction consists  
27 of a hard organic waste material (char) that occurs mainly in the  
28 bottom layer of all sumps. In the middle of the sumps is the tar  
29 waste (soft material); however, the location and of the tar within  
30 the sumps is quite variable. The upper portion of the sumps is  
31 comprised of soil or a combination of soil and drilling mud.  
32 Release of the wastes through the soil cover and onto the ground  
33 surface has been regularly observed on the sumps. In addition,  
34 ongoing release of waste found in the sumps to the groundwater has  
35 been detected. Organic and inorganic compounds, including benzene,



1 tetrahydrothiopene and arsenic have been detected in the perched  
2 and regional aquifers. Additional information regarding  
3 groundwater contamination is contained in the attached Groundwater  
4 ROD (see Attachment 1).

5 19. The exposure pathways of concern evaluated for potential  
6 health risks are: (1) inhalation of volatile organic compounds  
7 (VOCs) emitted from the sumps; (2) inhalation of fugitive dust and  
8 inorganic compounds generated by wind erosion; (3) incidental  
9 ingestion of contaminated soil and waste; (4) ingestion of  
10 contaminated soil; (5) dermal contact with contaminated soil and  
11 waste. Benzene and sulfur dioxide are the primary chemical of  
12 concern. Total carcinogenic risks due to this multipathway  
13 exposure is in the range of  $3 \times 10^{-8}$  to  $5 \times 10^{-4}$ . Further information  
14 regarding source risks is contained in the attached Source ROD (see  
15 Attachment 2). Groundwater ingestion was evaluated in the  
16 Groundwater ROD and found to be an unacceptable risk for local  
17 perched water. Further information regarding groundwater risks is  
18 contained in the Groundwater ROD (see Attachment 1).

19 20. The contingency remedy selected for the source requires that  
20 a RCRA equivalent closure be implemented. To prevent further  
21 contamination, the groundwater remedy requires that infiltration of  
22 surface water be reduced. By doing so, the groundwater remedy will  
23 reduce or eliminate current and future site risks to within an  
24 acceptable range. Specifically, direct contact and inhalation  
25 risks discussed above will be reduced by: (1) constructing a  
26 multilayer cap over the untreated sumps with a gas collection and  
27 treatment system to prevent infiltration of water and release of  
28 hazardous air emissions; (2) building subsurface slurry walls  
29 around the sumps to prevent migration of water into the waste and  
30 outward migration of contaminants; and (3) stabilizing steep slopes  
31 on the site with retaining walls to prevent seismic failure.  
32 Future ingestion or inhalation of contaminated groundwater will be  
33 prevented by reducing the possibility of additional contaminants  
34 reaching the aquifer and by conducting groundwater monitoring.

1 This remedy will prevent human and environmental exposure of wastes  
2 contained in the sumps. This remedy will greatly reduce the  
3 migration of contaminants into the perched and regional aquifers.

4 21. Respondents, or their predecessors in interest, each generated  
5 refinery waste sludge that was disposed of at the McColl Site.  
6 Respondents, or their predecessors in interest, each arranged for  
7 the disposal or treatment, or arranged with a transporter for  
8 transport for disposal or treatment of hazardous substances that  
9 each owned or possessed and that were disposed of at the McColl  
10 Site.

11 22. In February 1991, the United States and the State as co-  
12 plaintiffs filed an action against the Respondents under Section  
13 107(a) of CERCLA, 42 U.S.C. 9607(a) in federal district court  
14 seeking past costs and a declaration of future liability.

15 23. On September 28, 1993, the Court granted the United States and  
16 State's motion for partial summary judgement on liability, (United  
17 States, et al. v. Shell Oil Company, et al., 841 F. Supp. 962, C.D.  
18 Cal.). The Court found the Respondents liable as generators and  
19 arrangers for disposal.

### 20 III. CONCLUSIONS OF LAW AND DETERMINATIONS

21 23. The Site and any other area where hazardous substances have  
22 come to be located is a "facility" as defined in Section 101(9) of  
23 CERCLA, 42 U.S.C. § 9601(9).

24 24. Each Respondent is a "person" as defined in Section 101(21) of  
25 CERCLA, 42 U.S.C. § 9601(21).

26 25. Respondents are each a "liable party" as defined in Section  
27 107(a) of CERCLA, 42 U.S.C. § 9607(a) and are subject to this Order  
28 under Section 106(a) of CERCLA, 42 U.S.C. § 9606(a).

29 26. The substances found at the Site are "hazardous substances" as  
30 defined in Section 101(14) of CERCLA, 42 U.S.C. § 9601(14).

31 27. The past disposal and migration of hazardous substances from  
32 the Site constitute "releases" as defined in Section 101(22) of  
33 CERCLA, 42 U.S.C. § 9601(22).

34 28. The potential for future migration of hazardous substances  
35 from the Site poses a threat of a "release" as defined in Section

1 101(22) of CERCLA, 42 U.S.C. § 9601(22).

2 29. The release and threat of release of one or more hazardous  
3 substances from the facility may present an imminent and  
4 substantial endangerment to the public health or welfare or the  
5 environment.

6 30. The contamination and endangerment at this Site constitute an  
7 indivisible injury. The actions required by this Order are  
8 necessary to protect the public health, welfare and the  
9 environment.

#### 10 IV. NOTICE TO THE STATE

11 31. On July 10, 1996, prior to issuing this Order, EPA notified  
12 the State that EPA would be issuing this Order.

#### 13 V. ORDER

14 32. Based on the foregoing, Respondents are hereby ordered,  
15 jointly and severally, to comply with the following provisions,  
16 including but not limited to all attachments to this Order, all  
17 documents incorporated by reference into this Order, and all  
18 schedules and deadlines in this Order, attached to this Order, or  
19 incorporated by reference into this Order.

#### 20 VI. DEFINITIONS

21 33. Unless otherwise expressly provided herein, terms used in this  
22 Order which are defined in CERCLA or in regulations promulgated  
23 under CERCLA shall have the meaning assigned to them in the statute  
24 or its implementing regulations. Whenever terms listed below are  
25 used in this Order or in the documents attached to this Order or  
26 incorporated by reference into this Order, the following  
27 definitions shall apply:

28 A. "CERCLA" shall mean the Comprehensive Environmental  
29 Response, Compensation, and Liability Act of 1980, as amended, 42  
30 U.S.C. §§ 9601 et seq.

31 B. "Day" shall mean a working day which shall mean a day  
32 other than a Saturday, Sunday, or federal holiday, or the days

1 November 24 through 26 and December 20 through 31 of each year. In  
2 computing any period of time under this Order, where the last day  
3 would fall on a day that is not a working day, the period shall run  
4 until the end of the next working day.

5 C. "EPA" shall mean the United States Environmental  
6 Protection Agency.

7 D. "Groundwater Record of Decision" or "Groundwater ROD"  
8 shall mean the EPA Record of Decision relating to the Site, which  
9 addresses the Groundwater Operable Unit signed on May 15, 1996, by  
10 the Director of the Superfund Division, EPA Region 9, and all  
11 attachments thereto (Attachment 1).

12 E. "National Contingency Plan" or "NCP" shall mean the  
13 National Contingency Plan promulgated pursuant to Section 105 of  
14 CERCLA, 42 U.S.C. § 9605, codified at 40 C.F.R. Part 300, including  
15 any amendments thereto.

16 F. "Operable Unit" shall mean a discrete action that  
17 comprises a incremental step toward comprehensively addressing site  
18 problems. This discrete portion of a remedial response manages  
19 migration, or elimination or mitigates a release, threat of  
20 release, or pathway of exposure. The clean up of a site can be  
21 divided into a number of operable units, depending on the  
22 complexity of the problems associated with the site. Operable  
23 units may address geographical portions of the site, specific site  
24 problems, or initial phases of an action, or may consist of any  
25 actions that are concurrent but located in different parts of the  
26 site.

27 G. "Operation and Maintenance" or "O&M" shall mean all  
28 activities required under the Operation and Maintenance Plan  
29 developed pursuant to this Order and the Statement of Work approved  
30 by EPA.

31 H. "Paragraph" shall mean a portion of this Order identified  
32 by an arabic numeral.

33 I. "Performance Standards" shall mean those cleanup  
34 standards, standards of control, design criteria, including those  
35 presented in the Source Final Integrated Conceptual Design Report

1 and other substantive requirements, criteria, or limitations,  
2 identified in the Records of Decision and Statement of Work, that  
3 the Remedial Action and Work required by this Order must attain and  
4 maintain.

5 J. "Remedial Action" or "RA" shall mean those activities  
6 including construction, operations, and maintenance of the remedy,  
7 to be undertaken by Respondents to implement the remedies contained  
8 in the source and groundwater RODs. The Source and Groundwater  
9 remedial actions will be conducted in an integrated fashion and the  
10 combined effort will be referred to as the "Integrated Remedial  
11 Action".

12 K. "Remedial Design" or "RD" shall mean those activities to  
13 be undertaken by Respondents to develop the final plans and  
14 specifications for the Remedial Action pursuant to the Source and  
15 Groundwater Remedial Design Work Plans.

16 L. "Response Costs" shall mean all costs, including direct  
17 costs, indirect costs, and accrued interest incurred by the United  
18 States and the State to perform or support response actions at the  
19 Site. Response costs include but are not limited to the costs of  
20 overseeing the Work, such as the costs of reviewing or developing  
21 plans, reports and other items pursuant to this Order and costs  
22 associated with verifying the Work.

23 M. "Site" or "McColl Superfund Site" shall mean the property  
24 encompassing approximately 22 acres, located at 2650 Rosecrans  
25 Avenue, Fullerton, California, including all areas where hazardous  
26 substances were disposed or have come to be located, as described  
27 in the Source Record of Decision and the Groundwater Record of  
28 Decision.

29 N. "Source Record of Decision" or "Source ROD" shall mean  
30 the EPA Record of Decision relating to the Site, which addresses  
31 the Source Operable Unit, and signed on June 30, 1993, by the  
32 Regional Administrator, EPA Region 9, and all attachments thereto.

33 O. "Statement of Work," "SOW," shall mean the statement of  
34 work for implementation of the Final Integrated Remedial Action,  
35 and the Source and Groundwater Operations and Maintenance at the

1 Site, as set forth in Attachment 4 to this Order. The Statement of  
2 Work is incorporated into this Order and is an enforceable part of  
3 this Order.

4 P. "Section" shall mean a portion of this Order identified  
5 by a roman numeral and includes one or more paragraphs.

6 Q. "State" shall mean the State of California.

7 R. "United States" shall mean the United States of America.

8 S. "Work" shall mean all activities Respondents are required  
9 to perform under this Order, including Remedial Design, Remedial  
10 Action, and Operation and Maintenance for both the Groundwater and  
11 the Source Operable Units, and any activities required to be  
12 undertaken pursuant to this Order.

#### 13 VII. NOTICE OF INTENT TO COMPLY

14 34. Respondents shall provide, not later than five (5) days after  
15 the effective date of this Order, written notice to EPA's Remedial  
16 Project Manager (RPM) stating whether they will comply with the  
17 terms of this Order (RA-1). If Respondents, or any one of them, do  
18 not unequivocally commit to perform the work as provided by this  
19 Order, they, or each so refusing, shall be deemed to have violated  
20 this Order and to have failed or refused to comply with this Order.  
21 Respondents' written notice shall describe, using facts that exist  
22 on or prior to the effective date of this Order, any "sufficient  
23 cause" defenses asserted by Respondents under sections 106(b) and  
24 107(c)(3) of CERCLA. The absence of a response by EPA to the  
25 notice required by this paragraph shall not be deemed to be  
26 acceptance of Respondents' assertions.

#### 27 VIII. PARTIES BOUND

28 35. This Order shall apply to and be binding upon each Respondent,  
29 their directors, officers, employees, agents, successors, and  
30 assigns. Respondents are jointly and severally responsible for  
31 carrying out all activities required by this Order. No change in  
32 the ownership, corporate status, or other control of any  
33 Respondents shall alter any of the Respondents' responsibilities

1 under this Order.

2 36. Respondents shall provide a copy of this Order to any  
3 prospective owners or successors before a controlling interest in  
4 Respondents' assets, property rights, or stock are transferred to  
5 the prospective owner or successor. Respondents shall provide a  
6 copy of this Order to each contractor, sub-contractor, laboratory,  
7 or consultant retained to perform any Work under this Order, within  
8 five days after the effective date of this Order or on the date  
9 such services are retained, whichever date occurs later.  
10 Respondents shall also provide a copy of this Order to each person  
11 representing any Respondent with respect to the Site or the Work  
12 and shall condition all contracts and subcontracts entered into  
13 hereunder upon performance of the Work in conformity with the terms  
14 of this Order. With regard to the activities undertaken pursuant  
15 to this Order, each contractor and subcontractor shall be deemed to  
16 be related by contract to the Respondents within the meaning of  
17 section 107(b)(3) of CERCLA, 42 U.S.C. § 9607(b)(3).  
18 Notwithstanding the terms of any contract, Respondents are  
19 responsible for compliance with this Order and for ensuring that  
20 their contractors, subcontractors and agents comply with this  
21 Order, and perform any Work in accordance with this Order.

22 37. Respondents' project coordinator shall be responsible for  
23 overseeing Respondents' implementation of this Order. All aspects  
24 of the Work to be Performed by Respondents pursuant to this Order  
25 shall be under the direction and supervision of the qualified  
26 project coordinator.

27 38. Within 5 days after the effective date of this Order,  
28 Respondents shall notify EPA in writing of the name and  
29 qualifications of the Respondents project coordinator, including  
30 primary support entities and staff, proposed to be used in carrying  
31 this Order (RA-2). If at any time Respondents proposes to use a  
32 different project coordinator, Respondents shall notify EPA and  
33 shall obtain approval from EPA before the new project coordinator  
34 performs any Work under this Order.

35 39. EPA will review Respondents' selection of a project

1 coordinator according to the terms of this paragraph and Section  
2 XIV of this Order. If EPA disapproves of the selection of the  
3 project coordinator, Respondents shall submit to EPA within 30 days  
4 after receipt of EPA's disapproval of the project coordinator  
5 previously selected, a list of project coordinators, including  
6 primary support entities and staff, that would be acceptable to  
7 Respondents. EPA will thereafter provide written notice to  
8 Respondents of the names of the project coordinators that are  
9 acceptable to EPA. Respondents may then select any approved  
10 project coordinator from that list and shall notify EPA of the name  
11 of the project coordinator selected within twenty-one (21) days of  
12 EPA's designation of approved project coordinators.

13 IX. WORK TO BE PERFORMED

14 40. Respondents shall cooperate with EPA in providing information  
15 regarding the Work to the public. As requested by the RPM,  
16 Respondents shall participate in the preparation of such  
17 information for distribution to the public and in public meetings  
18 which may be held or sponsored by EPA to explain activities at or  
19 relating to the Site.

20 41. As requested by the EPA RPM the Respondents shall submit to  
21 EPA for approval a Communication and Coordination Plan ("CCP") that  
22 specifies the requirements and procedures by which the Respondents  
23 will communicate and coordinate with one another in carrying out  
24 the requirements of the Order. The CCP shall include at a minimum  
25 the following:

26 T. Communication Strategy. The Respondents shall specify  
27 how the project coordinator and the individual Respondents will  
28 communicate and disseminate information relative to this Order.  
29 The name, title, address and telephone number of the primary  
30 contact person for each Respondent shall be included in the  
31 communication strategy.

32 U. Coordination of Efforts. The Respondents shall describe  
33 with specificity how the technical, financial, and administrative



1 requirements of this Order are to be coordinated and distributed  
2 among and performed by the Respondents. The CCP shall describe the  
3 obligations of each and every Respondent in full.

4 42. A duly authorized representative of each Respondent shall sign  
5 the CCP prior to submission of the CCP to EPA. Failure of any  
6 Respondent to sign the CCP will constitute a violation of this  
7 Order by the individual Respondent.

8 43. The Respondents shall submit all proposed changes or  
9 amendments to the CCP to EPA for approval.

10 A. Groundwater Remedial Design

11 44. EPA and the Respondents have agreed to integrate the source  
12 and groundwater remedial actions at the final design stage.  
13 Specifically, the remedial design for the Groundwater ROD will be  
14 integrated with the ongoing remedial design for the Source ROD by  
15 developing a single integrated design for both operable units. To  
16 this end, preliminary design documents for the groundwater remedial  
17 action have already been submitted. The design of the source  
18 closure containment system is currently being developed by the  
19 Respondents pursuant to Order No. 93-21. Respondents shall  
20 integrate the design of the groundwater response action with the  
21 design of the Source response action in the Final Design required  
22 under Order No. 93-21.

23 45. Respondents shall submit, for EPA approval, this Integrated  
24 Remedial Design in accordance with the schedule for the Final  
25 Design required under Order No. 93-21.

26 46. Respondents shall include as part of the Integrated Remedial  
27 Design the following elements: (1) groundwater design criteria and  
28 design philosophy; (2) results of additional groundwater field  
29 sampling; (3) project delivery strategy; (4) groundwater design  
30 plans, drawings and sketches; and (5) required groundwater  
31 specifications in outline form.

32 B. Integrated Remedial Action/Construction

1 47. The Respondents shall prepare and submit for approval planning  
2 documents. Following EPA approval of the Integrated Design and  
3 construction planning documents the Respondents shall construct the  
4 remedial action. Construction of the remedial action shall include  
5 implementing temporary voluntary relocation of residents consistent  
6 with plans and guidance as approved by EPA.

7 48. The primary construction planning document shall be the  
8 Remedial Action/Construction Work Plan. The Respondents shall  
9 submit and implement the Remedial Action/Construction Work Plan  
10 consistent with the Final Integrated Remedial Design. Unless  
11 otherwise directed by EPA, Respondents shall not commence the  
12 construction at the Site prior to approval of the Remedial  
13 Action/Construction Work Plan.

14 48. The Respondents shall submit to EPA for approval, a Draft  
15 Remedial Action/Construction Work Plan within (thirty) 30 days  
16 after the effective date of this Order (RA-3). Respondents shall  
17 submit a proposed detailed schedule for completing all of the work  
18 required. The schedule shall address at a minimum site preparation  
19 and all construction activities up to and including O&M until EPA  
20 approval of the Remedial Action Report discussed in Paragraph 60.

21 ~~(RA-2)~~

22 49. The Remedial Action/Construction Work Plan shall be developed  
23 in accordance with the RODs, any ESDs and any amendments to the  
24 RODs, and the attached Statement of Work, and shall be consistent  
25 with the Integrated Remedial Design as approved by EPA (hereinafter  
26 "Final Integrated Remedial Design"). The Remedial  
27 Action/Construction Work Plan shall include methodologies, plans  
28 and schedules for completion of at least the following: (1)  
29 selection of the remedial action contractor; (2) implementation of  
30 the CQAP; (3) identification of and satisfactory compliance with  
31 applicable permitting requirements; (4) implementation of the  
32 Operation and Maintenance Plan; (5) implementation of the Community  
33 Contingency Plan; (6) development and submission of the Performance  
34 Standards assessment plan; and (7) development and submission of  
35 the Data Management Plan which addresses various forms of data

1 (paper, electronic, video, photographic). The Remedial  
2 Action/Construction Work Plan shall also include a schedule for  
3 implementing all remedial action tasks identified in the Statement  
4 of Work and shall identify the initial formulation of Respondents'  
5 Remedial Action Project Team (including the Supervising  
6 Contractor). Upon approval by EPA, Respondents shall implement the  
7 Remedial Action Construction according to the schedules in the  
8 approved RA/CWP.

9 50. The Remedial Action/Construction Work Plan shall also include  
10 the following major attachments which are intended to function as  
11 independent field operational guides and are further described in  
12 the SOW: a) a Residual Management Plan; b) Site perimeter and  
13 Ambient Air Monitoring Plan; c) Interim Site Security and  
14 Maintenance Plan; d) Health and Safety Plan; e) modified Community  
15 Contingency Plan; f) Construction Quality Assurance Plan; and g)  
16 Community Relations Plan. The Health and Safety Plan for field  
17 activities shall conform to applicable Occupational Safety and  
18 Health Administration and EPA requirements, including but not  
19 limited to the regulations at 54 Fed. Reg. 9294. The Construction  
20 Quality Assurance Plan document shall include a Field Sampling  
21 Plan for measuring progress toward meeting the design criteria.  
22 The Construction Quality Assurance Plan shall describe the approach  
23 to quality assurance during construction activities at the Site and  
24 shall specify a quality assurance official, independent of the  
25 construction contractor, to conduct a quality assurance program  
26 during the construction phase of the project.

27 51. The Final Integrated Remedial Design and the Remedial  
28 Action/Construction Work Plan shall be planned and implemented in  
29 a manner consistent with the attached Statement of Work, and shall  
30 conform with EPA's "Superfund Remedial Design and Remedial Action  
31 Guidance, OSWER Directive 9355.0-4A".

32 52. If Respondents seek to retain a construction contractor or  
33 sub-contractors to assist in the performance of the Integrated  
34 Remedial Action, then Respondents shall submit a copy of the  
35 contractor or subcontractors solicitation documents to EPA upon

request by EPA and not later than five (5) days after publishing the solicitation documents.

53. Within (ten) 10 days after Respondents selection of a construction contractor to be used in carrying out work under this Order Respondents shall notify EPA in writing of the name, title, and qualifications of the selected construction contractor (RA-4). If at any time Respondents propose to change the construction contractor, Respondents shall notify EPA. All personnel performing work at the site must be qualified to perform those portions of the work for which they are assigned. Respondents shall submit evidence that all portions of the work will be performed, not merely reviewed, by personnel qualified to perform those portions of the Work for which they have been assigned.

54. The Work performed by Respondents pursuant to this Order shall, at a minimum, achieve the performance standards specified in the Source and Groundwater Records of Decision.

55. Notwithstanding any action by EPA, Respondents remain fully responsible for achievement of the performance standards specified in the Source and Groundwater Records of Decision. Nothing in this Order, or in EPA's approval of the Statement of Work, or in the Remedial Action/Construction Action Work Plans, or approval of any other submission, shall be deemed to constitute a warranty or representation of any kind by EPA that full performance of the Remedial Actions achieve the Performance Standards set forth in the Records of Decision. Respondents' compliance with such approved documents does not preclude EPA from seeking additional work to achieve the applicable design criteria.

#### C. Operations and Maintenance

56. Within ninety (90) days after EPA approves the Draft Remedial Action/Construction Work Plan, (hereinafter "Final Integrated Remedial Action/Construction Work Plan") Respondents shall submit an Operation and Maintenance Plan for EPA review and approval (RA-5). Consistent with the integration of groundwater and source response actions/construction, this document shall encompass

1 Operations and Maintenance for all Site activities, including  
2 Groundwater and Source remedial actions and general site  
3 maintenance. The Operations and Maintenance Plan activities shall  
4 commence upon the EPA approval of the Remedial Action Report and  
5 continue thereafter. The O&M Plan shall include the following as  
6 attachments: a) Long-term Groundwater Monitoring Plan; b) Long-term  
7 Site Security Plan; d) Health and Safety Plan; and e) Remedy  
8 Effectiveness Plan.

9 57. Under the Operations and Maintenance Plan, the Respondents  
10 shall continue to perform routine maintenance including landscape  
11 maintenance. The Respondents shall maintain the vegetative cover  
12 and cut the grass and weeds covering all areas of the Site  
13 including all slope and sump areas.

14 58. As a part of the Operations and Maintenance Plan the  
15 Respondents shall submit to EPA for review and approval a Security  
16 Plan for the Site. The Security Plan shall address on-site  
17 continuous security.

18 59. Respondents shall, prior to any off-site shipment of hazardous  
19 substances from the Site to an out-of-state waste management  
20 facility, provide written notification to the appropriate state  
21 environmental official in the receiving state and to RPM of such  
22 shipment of hazardous substances. However, the notification of  
23 shipments shall not apply to any off-Site shipments when the total  
24 volume of all shipments from the Site to the State will not exceed  
25 ten (10) cubic yards.

26 a. The notification shall be in writing, and shall include  
27 the following information, where available: (1) the name and  
28 location of the facility to which the hazardous substances are to  
29 be shipped; (2) the type and quantity of the hazardous substances  
30 to be shipped; (3) the expected schedule for the shipment of the  
31 hazardous substances; and (4) the method of transportation.  
32 Respondents shall notify the receiving state of major changes in  
33 the shipment plan, such as a decision to ship the hazardous  
34 substances to another facility within the same state, or to a  
35 facility in another state.

1           b.    The identity of the receiving facility and state will be  
2 determined by Respondents following the award of the contract for  
3 construction. Respondents shall provide all relevant information,  
4 including information under the categories noted in paragraph (a)  
5 above, on the off-Site shipments as soon as practicable after the  
6 award of the contract and before the hazardous substances are  
7 actually shipped.

8   60.   a. Within thirty (30) days after Respondents conclude that the  
9 Integrated Remedial Action/Construction has been fully performed,  
10 Respondents shall so notify EPA by letter and shall schedule and  
11 conduct a pre-certification inspection to be attended by  
12 Respondents and EPA (RA-6). The pre-certification inspection shall  
13 be followed by a Remedial Action Report submitted within (90)  
14 ninety days after the pre-certification inspection (RA-7). The  
15 Remedial Action Report shall contain certification, by a registered  
16 professional engineer and the Respondents' project coordinator,  
17 that all Remedial Action/Construction activities have been  
18 completed in full satisfaction of the requirements of this Order  
19 and that all systems are operational and functional. If, after  
20 completion of the pre-certification inspection and receipt and  
21 review of the written report, EPA determines that the Integrated  
22 Remedial Action or any portion thereof has not been completed in  
23 accordance with this Order, EPA shall notify Respondents in writing  
24 of the activities that must be undertaken to complete the  
25 Integrated Remedial Action/Construction and shall set forth in the  
26 notice a schedule for performance of such activities. Respondents  
27 shall perform all activities described in the notice in accordance  
28 with the specifications and schedules established therein. If EPA  
29 concludes, following the initial or any subsequent certification of  
30 completion by Respondents that the Integrated Remedial  
31 Action/Construction has been fully performed in accordance with  
32 this Order, EPA may notify Respondents that the Integrated  
33 Remedial Action/Construction has been fully performed. EPA's  
34 notification shall be based on present knowledge and Respondents'  
35 certification to EPA, and shall not limit EPA's right to perform

1 periodic reviews pursuant to section 121(c) of CERCLA, 42 U.S.C.  
2 § 9621(c), or to take or require any action that in the judgment of  
3 EPA is appropriate at the Site, in accordance with 42 U.S.C.  
4 §§ 9604, 9606, or 9607.

5 b. Within (five) 5 years after EPA approves the Remedial  
6 Action Report and each (five) 5 years thereafter the Respondents  
7 shall prepare a Five Year Review Report of the remedy implemented  
8 for the Source and Groundwater for EPA review and approval (RA-12).

9 Prior to preparation of the report the Respondents shall submit to  
10 EPA for review and approval an outline showing proposed contents of  
11 the Five Year Review Report.

#### 12 X. FAILURE TO ATTAIN PERFORMANCE STANDARDS

13 61. In the event that EPA determines that additional response  
14 activities are necessary to meet applicable Performance Standards,  
15 EPA may notify Respondents that additional response actions are  
16 necessary.

17 62. Unless otherwise stated by EPA, within thirty (30) days of  
18 receipt of notice from EPA that additional response activities are  
19 necessary to meet any applicable Performance Standards, Respondents  
20 shall submit for approval by EPA a work plan for the additional  
21 response activities. The plan shall conform to the applicable  
22 requirements of sections IX, XVI, and XVII of this Order. Upon  
23 EPA's approval of the plan pursuant to Section XIV, Respondents  
24 shall implement the plan for additional response activities in  
25 accordance with the provisions and schedule contained therein.

#### 26 XI. EPA PERIODIC REVIEW

27 63. Under section 121(c) of CERCLA, 42 U.S.C. § 9621(c), and any  
28 applicable regulations, EPA may review the Site to assure that the  
29 Work performed pursuant to this Order adequately protects human  
30 health and the environment. Until such time as EPA certifies  
31 completion of the Work, Respondents shall conduct the requisite  
32 studies, investigations, or other response actions as determined  
33 necessary by EPA in order to permit EPA to conduct the review under

1 section 121(c) of CERCLA. As a result of any review performed  
2 under this paragraph, Respondents may be required to perform  
3 additional Work or to modify Work previously performed.

#### 4 XII. ADDITIONAL RESPONSE ACTIONS

5 64. EPA may determine that in addition to the Work identified in  
6 this Order and attachments to this Order, additional response  
7 activities may be necessary to protect human health and the  
8 environment. If EPA determines that additional response activities  
9 are necessary, EPA may require Respondents to submit a work plan  
10 for additional response activities. EPA may also require  
11 Respondents to modify any plan, design, or other deliverable  
12 required by this Order, including any approved modifications.

13 65. Not later than thirty (30) days after receiving EPA's notice  
14 that additional response activities are required pursuant to this  
15 Section, Respondents shall submit a work plan for the response  
16 activities to EPA for review and approval. Upon approval by EPA,  
17 the work plan is incorporated into this Order as a requirement of  
18 this Order and shall be an enforceable part of this Order. Upon  
19 approval of the work plan by EPA, Respondents shall implement the  
20 work plan according to the standards, specifications, and schedule  
21 in the approved work plan. Respondents shall notify EPA of their  
22 intent to perform such additional response activities within seven  
23 (7) days after receipt of EPA's request for additional response  
24 activities.

#### 25 XIII. ENDANGERMENT AND EMERGENCY RESPONSE

26 66. In the event of any action or occurrence during the  
27 performance of the Work which causes or threatens to cause a  
28 release of a hazardous substance or which may present an immediate  
29 threat to public health or welfare or the environment, Respondents  
30 shall immediately take all appropriate action to prevent, abate, or  
31 minimize the threat, and shall immediately notify the EPA Remedial  
32 Project Manager (RPM). If the RPM is not available, Respondents  
33 shall notify the EPA Emergency Response Unit, Region IX (415-744-



1 2000. Respondents shall take such action in consultation with the  
2 RPM and in accordance with all applicable provisions of this Order,  
3 including but not limited to the Health and Safety Plan and the  
4 Contingency Plan. In the event that Respondents fail to take  
5 appropriate response action as required by this Section, and EPA  
6 takes that action instead, Respondents shall be liable to EPA for  
7 all costs of the response action not inconsistent with the NCP.

8 67. Nothing in the preceding paragraph shall be deemed to limit  
9 any authority of the United States to take, direct, or order all  
10 appropriate action to protect human health and the environment or  
11 to prevent, abate, or minimize an actual or threatened release of  
12 hazardous substances on, at, or from the Site.

#### 13 XIV. EPA REVIEW OF SUBMISSIONS

14 68. After review of any deliverable, plan, report or other item  
15 which is required to be submitted for review and approval pursuant  
16 to this Order, EPA may: (a) approve the submission; (b) approve the  
17 submission with modifications; (c) disapprove the submission and  
18 direct Respondents to resubmit the document after incorporating  
19 EPA's comments; or (d) disapprove the submission and assume  
20 responsibility for performing all or any part of the response  
21 action. As used in this Order, the terms "approval by EPA," "EPA  
22 approval," or a similar term means the action described in  
23 paragraphs (a) or (b) of this paragraph.

24 69. In the event of an approval by EPA, Respondents shall proceed  
25 to take any action required by the plan, report, or other item, as  
26 approved or modified by EPA.

27 70. Upon receipt of a notice of an EPA disapproval, Respondents  
28 shall, within twenty-one (21) days or such time as specified by EPA  
29 in its notice of disapproval, correct the deficiencies and resubmit  
30 the plan, report, or other item for approval. Notwithstanding the  
31 notice of disapproval, or approval with modifications, Respondents  
32 shall proceed, at the direction of EPA, to take any action required  
33 by any non-deficient portion of the submission.

34 71. If any submission is disapproved by EPA, Respondents shall be

1 deemed to be in violation of this Order.

2 XV. PROGRESS REPORTS AND MEETINGS

3 72. In addition to the other deliverables set forth in this Order,  
4 Respondents shall provide regular progress reports as directed by  
5 EPA with respect to actions and activities undertaken pursuant to  
6 this Order. The progress reports shall be submitted on or before  
7 the fifteenth day of each month following the effective date of  
8 this Order unless otherwise directed by the RPM. At a minimum  
9 these progress reports shall: (1) describe the actions which have  
10 been taken to comply with this Order during the prior month; (2)  
11 include all results of sampling and tests and all other data  
12 received by Respondents and not previously submitted to EPA; (3)  
13 describe all work planned for the next 3 months with schedules  
14 relating such work to the overall project schedule for RD/RA  
15 completion; and (4) describe all problems encountered and any  
16 anticipated problems, any actual or anticipated delays, and  
17 solutions developed and implemented to address any actual or  
18 anticipated problems or delays.

19 73. Upon three days advance notice by EPA, by telephone or in  
20 writing, the project coordinator for Respondents shall attend a  
21 meeting at a time and place determined by EPA, to discuss issues  
22 relating to the contents of any deliverable, plan, report, or other  
23 item which is required to be submitted for review and approval  
24 pursuant to this Order, or relating to Work to be performed by  
25 Respondents pursuant to this Order.

26 XVI. QUALITY ASSURANCE, SAMPLING AND DATA ANALYSIS

27 74. Respondents shall use the quality assurance, quality control,  
28 and chain of custody procedures described in the "EPA NEIC Policies  
29 and Procedures Manual," May 1978, revised May 1986, EPA-330/9-78-  
30 001-R, EPA's "Guidelines and Specifications for Preparing Quality  
31 Assurance Program Documentation," June 1, 1987, EPA's "Data Quality  
32 Objective Guidance," (EPA/540/G87/003 and 004), and any amendments

1 to these documents, while conducting all sample collection and  
2 analysis activities required herein by any plan. To provide  
3 quality assurance and maintain quality control, Respondents shall:

4 a. Use only laboratories which have a documented Quality  
5 Assurance Program that complies with EPA guidance  
6 document QAMS-005/80.

7 b. Ensure that EPA personnel and EPA's authorized  
8 representatives are allowed access to the laboratory and  
9 personnel utilized by the Respondents for analyses.

10 75. Respondents shall notify EPA not less than fourteen (14) days  
11 in advance of any sample collection activity. At the request of  
12 EPA, Respondents shall allow split or duplicate samples to be taken  
13 by EPA or its authorized representatives, of any samples collected  
14 by Respondents with regard to the Site or pursuant to the  
15 implementation of this Order. In addition, EPA shall have the  
16 right to take any additional samples that EPA deems necessary.

#### 17 XVII. COMPLIANCE WITH APPLICABLE LAWS

18 76. All activities by Respondents pursuant to this Order shall be  
19 performed in accordance with the requirements of all federal and  
20 State statutes and regulations. EPA has determined that the  
21 activities contemplated by this Order are consistent with the  
22 National Contingency Plan (NCP) if performed in full compliance  
23 with the RODs, this Order, and the plans and schedules approved  
24 hereunder.

25 77. Except as provided in section 121(e) of CERCLA and the NCP, no  
26 permit shall be required for any portion of the Work conducted  
27 entirely on-Site. Where any portion of the Work requires a federal  
28 or State permit or approval, Respondents shall submit timely  
29 applications and take all other actions necessary to obtain and to  
30 comply with all such permits or approvals.

31 78. This Order is not, and shall not be construed to be a permit  
32 issued pursuant to any federal or State statute or regulation.

33 79. All materials removed from the Site shall be disposed of or  
34 treated at a facility approved by the RPM and in accordance with

1 section 121(d)(3) of CERCLA, 42 U.S.C. § 9621(d)(3); with the U.S.  
2 EPA "Revised Off-Site policy," OSWER Directive 9834.11, November  
3 13, 1987; and with all other applicable Federal, state, and local  
4 requirements.

5 XVIII. PROJECT MANAGER

6 80. All communications, whether written or oral, from Respondents  
7 to EPA shall be directed to the RPM. Unless otherwise directed by  
8 EPA, Respondents shall submit to EPA three copies of all documents,  
9 including plans, reports, and other correspondence, which are  
10 developed pursuant to this Order.

11 The RPM is:

12 Patti Collins  
13 U.S. EPA Region IX  
14 75 Hawthorne Street, H-6-5  
15 San Francisco, CA 94105  
16 (415) 744-2229

17 81. EPA has the unreviewable right to change its RPM. If EPA  
18 changes its RPM, EPA will inform Respondents in writing of the  
19 name, address, and telephone number of the new RPM.

20 82. The RPM shall have the authority lawfully vested in a RPM and  
21 On-Scene Coordinator (OSC) by the National Contingency Plan, 40  
22 C.F.R. Part 300. EPA's RPM or Alternate RPM shall have authority,  
23 consistent with the National Contingency Plan, to halt any work  
24 required by this Order, and to take any necessary response action.

25 XIX. ACCESS TO SITE NOT OWNED BY RESPONDENT(S)

26 83. If the Site, the off-Site area that is to be used for access,  
27 property where documents required to be prepared or maintained by  
28 this Order are located, or other property subject to or affected by  
29 the clean up, is owned in whole or in part by parties other than  
30 those bound by this Order, Respondents will obtain, or use their  
31 best efforts to obtain, site access agreements from the present  
32 owner(s) no less than thirty (30) days before access is necessary

1 and no later than 60 days after the effective date of this Order  
2 (RA-8). Such agreements shall provide access for EPA, its  
3 contractors and oversight officials, the state and its contractors,  
4 and Respondents or Respondents' authorized representatives and  
5 contractors, and such agreements shall specify that Respondents are  
6 not EPA's representative with respect to liability associated with  
7 Site activities. Respondents shall save and hold harmless the  
8 United States and its officials, agents, employees, contractors,  
9 subcontractors, or representatives for or from any and all claims  
10 or causes of action or other costs incurred by the United States  
11 including but not limited to attorneys fees and other expenses of  
12 litigation and settlement arising from or on account of acts or  
13 omissions of Respondents, their officers, directors, employees,  
14 agents, contractors, subcontractors, and any persons acting on  
15 their behalf or under their control, in carrying out activities  
16 pursuant to this Order, including any claims arising from any  
17 designation of Respondents as EPA's authorized representatives  
18 under section 104(e) of CERCLA. Copies of such agreement shall be  
19 provided to EPA prior to Respondents' initiation of field  
20 activities. Respondents' best efforts shall include providing  
21 reasonable compensation to any off-Site property owner. If access  
22 agreements are not obtained within the time referenced above,  
23 Respondents shall immediately notify EPA of its failure to obtain  
24 access. Subject to the United States' non-reviewable discretion,  
25 EPA may use its legal authorities to obtain access for the  
26 Respondents, may perform those response actions with EPA  
27 contractors at the property in question, or may terminate the Order  
28 if Respondents cannot obtain access agreements. If EPA performs  
29 those tasks or activities with contractors and does not terminate  
30 the Order, Respondents shall perform all other activities not  
31 requiring access to that property, and shall be liable to EPA, for  
32 all costs incurred in performing such activities. Respondents  
33 shall integrate the results of any such tasks undertaken by EPA  
34 into its reports and deliverables.

1 XX. DATA/DOCUMENT AVAILABILITY

2 84. Respondents may assert a claim of business confidentiality  
3 covering part or all of the information submitted to EPA pursuant  
4 to the terms of this Order under 40 C.F.R. § 2.203, provided such  
5 claim is not inconsistent with section 104(e)(7) of CERCLA, 42  
6 U.S.C. § 9604(e)(7) or other provisions of law. This claim shall  
7 be asserted in the manner described by 40 C.F.R. § 2.203(b) and  
8 substantiated by Respondents at the time the claim is made.  
9 Information determined to be confidential by EPA will be given the  
10 protection specified in 40 C.F.R. Part 2. If no such claim  
11 accompanies the information when it is submitted to EPA, it may be  
12 made available to the public by EPA or the state without further  
13 notice to the Respondents. Respondents shall not assert  
14 confidentiality claims with respect to any data related to Site  
15 conditions, sampling, or monitoring.

16 85. Confidential Information. The information requested herein  
17 must be provided even though the Respondents may contend that it  
18 includes confidential information or trade secrets. Respondents  
19 may assert a confidentiality claim covering part or all of the  
20 information requested, pursuant to Sections 104(e)(7)(E) and (F) of  
21 CERCLA, 42 U.S.C. §§9604(e)(7)(E) and (F), and Section 3007(b) of  
22 RCRA, 42 U.S.C. §6927(b), and 40 C.F.R. §2.203(b).

23 86. If Respondents make a claim of confidentiality for any of the  
24 information submitted to EPA, Respondents' must prove that claim.  
25 For each document or response Respondents claim confidential,  
26 Respondents must separately address the following points:

- 27 1. clearly identify the portions of the information alleged to  
28 be entitled to confidential treatment;
- 29 2. the period of time for which confidential treatment is  
30 desired (e.g., until a certain date, until the occurrence  
31 of a specific event, or permanently);

1 3. measures taken by Respondents to guard against the undesired  
2 disclosure of the information to others;

3  
4 4. the extent to which the information has been disclosed  
5 to others, and the precautions taken in connection  
6 therewith;

7 5. pertinent confidentiality determinations, if any, by EPA  
8 or other federal agencies, and a copy of any such  
9 determinations or reference to them, if available; and

10 6. whether Respondents assert that disclosure of the information  
11 would likely result in substantial harmful effects on  
12 Respondents' business competitive position, and if so, what  
13 those harmful effects would be, why they should be viewed as  
14 substantial, and an explanation of the causal relationship  
15 between disclosure and such harmful effects.

16 87. To make a confidentiality claim, Respondents shall stamp, or  
17 type, "confidential" on all confidential responses and any related  
18 confidential documents. Confidential portions of otherwise  
19 nonconfidential documents should be clearly identified.  
20 Respondents shall indicate a date, if any, after which the  
21 information need no longer be treated as confidential. Respondents  
22 shall submit their response so that all nonconfidential  
23 information, including any redacted versions of documents are in  
24 one envelope and all materials for which Respondents desire  
25 confidential treatment are in another envelope.

26 88. All confidentiality claims are subject to EPA verification. It  
27 is important that Respondents satisfactorily show that they have  
28 taken reasonable measures to protect the confidentiality of the  
29 information and that Respondents intend to continue to do so, and  
30 that it is not and has not been obtainable by legitimate means  
31 without your consent. Information covered by such claim will be  
32 disclosed by EPA only to the extent permitted by CERCLA Section

1 104(e). If no such claim accompanies the information when it is  
2 received by EPA, then it may be made available to the public by EPA  
3 without further notice to Respondents.

4 89. Disclosure to EPA's Authorized Representatives. Information  
5 which Respondents submit in response to this Order may be disclosed  
6 by EPA to authorized representatives of the United States, pursuant  
7 to 40 C.F.R. 2.310(h), even if Respondents assert that all or part  
8 of it is confidential business information. The authorized  
9 representatives of EPA to which EPA may disclose information  
10 contained in your response are as follows:

- 11 1. Armstrong Data Services  
12 EPA Contract Number 68-W5-0024
- 13 2. ICF Kaiser  
14 EPA Contract Number 68-W9-0059
- 15 3. Department of Toxic Substances Control/California  
16 Environmental Protection Agency

17 Any subsequent additions or changes in EPA contractors who may have  
18 access to Respondents information submitted under this Order will  
19 be published in the Federal Register or provided in writing by EPA.  
20 This information may be made available to these authorized  
21 representatives of EPA for any of the following reasons: to assist  
22 with document handling, inventory, and indexing; or to assist the  
23 State in pursuing its own cost recovery action.

24 90. Respondents shall maintain for the period during which this  
25 Order is in effect, an index of documents that Respondents claim  
26 contain confidential business information. The index shall  
27 contain, for each document, the date, author, addressee, and  
28 subject of the document. Upon written request from EPA,  
29 Respondents shall submit a copy of the index to EPA.



1                   XXI. RECORD PRESERVATION AND DATA MANAGEMENT

2    91. Respondents shall provide to EPA upon request, copies of all  
3    documents and information within their possession and/or control or  
4    that of their contractors or agents relating to activities at the  
5    Site or to the implementation of this Order, including but not  
6    limited to sampling, analysis, chain of custody records, manifests,  
7    trucking logs, receipts, reports, sample traffic routing,  
8    correspondence, electronic files, videos, photographs, or other  
9    documents or information related to the Work. Respondents shall  
10   also make available to EPA for purposes of investigation,  
11   information gathering, or testimony, their employees, agents, or  
12   representatives with knowledge of relevant facts concerning the  
13   performance of the Work.

14   92. Until ten (10) years after EPA provides notice pursuant to  
15   paragraph Section IX paragraph 59 each Respondent shall preserve  
16   and retain all records and documents in its possession or control,  
17   including the documents in the possession or control of their  
18   contractors and agents on and after the effective date of this  
19   Order that relate in any manner to the Site. At the conclusion of  
20   this document retention period, Respondents shall notify the United  
21   States at least ninety (90) calendar days prior to the destruction  
22   of any such records or documents, and upon request by the United  
23   States, Respondents shall deliver any such records or documents to  
24   EPA.

25   93. Until ten (10) years after EPA provides notice pursuant to  
26   paragraph Section IX paragraph 59 of this Order, Respondents shall  
27   preserve, and shall instruct their contractors and agents to  
28   preserve, all documents, records, and information of whatever kind,  
29   nature or description relating to the performance of the Work.  
30   Upon the conclusion of this document retention period, Respondents  
31   shall notify the United States at least ninety (90) days prior to  
32   the destruction of any such records, documents or information, and,  
33   upon request of the United States, Respondents shall deliver all  
34   such documents, records and information to EPA.

35   94. Within thirty (30) days after the effective date of this

1 Order, Respondents shall submit a written certification to EPA's  
2 RPM that they have not altered, mutilated, discarded, destroyed or  
3 otherwise disposed of any records, documents or other information  
4 relating to their potential liability with regard to the Site since  
5 notification of potential liability by the United States or the  
6 State or the filing of suit against it regarding the Site (RA-9).  
7 Respondents shall not dispose of any such documents without prior  
8 approval by EPA. Respondents shall, upon EPA's request and at no  
9 cost to EPA, deliver the documents or copies of the documents to  
10 EPA.

11 XXII. DELAY IN PERFORMANCE

12 95. Any delay in performance of this Order that, in EPA's  
13 judgment, is not properly justified by Respondents under the terms  
14 of this paragraph shall be considered a violation of this Order.  
15 Any delay in performance of this Order shall not affect Respondents  
16 obligations to fully perform all obligations under the terms and  
17 conditions of this Order.

18 96. Respondents shall notify EPA of any delay or anticipated delay  
19 in performing any requirement of this Order. Such notification  
20 shall be made by telephone to the RPM within forty eight (48) hours  
21 after Respondents first knew or should have known that a delay  
22 might occur. Respondents shall adopt all reasonable measures to  
23 avoid or minimize any such delay. Within five (5) business days  
24 after notifying EPA by telephone, Respondents shall provide written  
25 notification fully describing the nature of the delay, any  
26 justification for delay, any reason why Respondents should not be  
27 held strictly accountable for failing to comply with any relevant  
28 requirements of this Order, the measures planned and taken to  
29 minimize the delay, and a schedule for implementing the measures  
30 that will be taken to mitigate the effect of the delay. Increased  
31 costs or expenses associated with implementation of the activities  
32 called for in this Order is not a justification for any delay in  
33 performance.

1                   XXIII. ASSURANCE OF ABILITY TO COMPLETE WORK

2     97. Respondents shall demonstrate their ability to complete the  
3     Work required by this Order and to pay all claims that arise from  
4     the performance of the Work by obtaining and presenting to EPA  
5     within thirty (30) days after effective date of this Order, one of  
6     the following: (1) a performance bond; (2) a letter of credit; (3)  
7     a guarantee by a third party; or (4) internal financial information  
8     to allow EPA to determine that Respondents have sufficient assets  
9     available to perform the Work (RA-10). Respondents shall  
10    demonstrate financial assurance in an amount no less than the  
11    estimate of cost for the remedial design and remedial action  
12    contained in the Records of Decision for the Site. If Respondents  
13    seek to demonstrate ability to complete the remedial action by  
14    means of internal financial information, or by guarantee of a third  
15    party, they shall re-submit such information annually, on the  
16    anniversary of the effective date of this Order. If EPA determines  
17    that such financial information is inadequate, Respondents shall,  
18    within thirty (30) days after receipt of EPA's notice of  
19    determination, obtain and present to EPA for approval one of the  
20    other three forms of financial assurance listed above.

21    98. At least seven (7) days prior to commencing any work at the  
22    Site pursuant to this Order, Respondents shall submit to EPA a  
23    certification that Respondents or their contractors and  
24    subcontractors have adequate insurance coverage or have  
25    indemnification for liabilities for injuries or damages to persons  
26    or property which may result from the activities to be conducted by  
27    or on behalf of Respondents pursuant to this Order (RA-11).  
28    Respondents shall ensure that such insurance or indemnification is  
29    maintained for the duration of the Work required by this Order.

30                   XXIV. UNITED STATES NOT LIABLE

31    99. The United States, by issuance of this Order, assumes no  
32    liability for any injuries or damages to persons or property  
33    resulting from acts or omissions by Respondents, or their  
34    directors, officers, employees, agents, representatives,

1 successors, assigns, contractors, or consultants in carrying out  
2 any action or activity pursuant to this Order. Neither EPA nor the  
3 United States may be deemed to be a party to any contract entered  
4 into by Respondents or their directors, officers, employees,  
5 agents, successors, assigns, contractors, or consultants in  
6 carrying out any action or activity pursuant to this Order.

#### 7 XXV. ENFORCEMENT AND RESERVATIONS

8 100. EPA reserves the right to bring an action against Respondents  
9 under section 107 of CERCLA, 42 U.S.C. § 9607, for recovery of any  
10 response costs incurred by the United States related to this Order  
11 and not reimbursed by Respondent(s). This reservation shall  
12 include but not be limited to past costs, direct costs, indirect  
13 costs, the costs of oversight, the costs of compiling the cost  
14 documentation to support oversight cost demand, as well as accrued  
15 interest as provided in section 107(a) of CERCLA.

16 101. Notwithstanding any other provision of this Order, at any time  
17 during the response action, EPA may perform its own studies,  
18 complete the response action (or any portion of the response  
19 action) as provided in CERCLA and the NCP, and seek reimbursement  
20 from Respondents for its costs, or seek any other appropriate  
21 relief.

22 102. Nothing in this Order shall preclude EPA from taking any  
23 additional enforcement actions, including modification of this  
24 Order or issuance of additional Orders, and/or additional remedial  
25 or removal actions as EPA may deem necessary, or from requiring  
26 Respondents in the future to perform additional activities pursuant  
27 to CERCLA, 42 U.S.C. § 9606(a), et seq., or any other applicable  
28 law. Respondents shall be liable under CERCLA section 107(a), 42  
29 U.S.C. § 9607(a), for the costs of any such additional actions.

30 103. Notwithstanding any provision of this Order, the United States  
31 hereby retains all of its information gathering, inspection and  
32 enforcement authorities and rights under CERCLA, RCRA and any other  
33 applicable statutes or regulations.

1 104. Respondents shall be subject to civil penalties under section  
2 106(b) of CERCLA, 42 U.S.C. § 9606(b), of not more than \$25,000 for  
3 each day in which Respondent(s) willfully violates, or fails or  
4 refuses to comply with this Order without sufficient cause. In  
5 addition, failure to properly provide response action under this  
6 Order, or any portion hereof, without sufficient cause, may result  
7 in liability under section 107(c)(3) of CERCLA, 42 U.S.C.  
8 § 9607(c)(3), for punitive damages in an amount at least equal to,  
9 and not more than three times the amount of any costs incurred by  
10 the Fund as a result of such failure to take proper action.

11 105. Nothing in this Order shall constitute or be construed as a  
12 release from any claim, cause of action or demand in law or equity  
13 against any person for any liability it may have arising out of or  
14 relating in any way to the Site.

15 106. If a court issues an order that invalidates any provision of  
16 this Order or finds that Respondents have sufficient cause not to  
17 comply with one or more provisions of this Order, Respondents shall  
18 remain bound to comply with all provisions of this Order not  
19 invalidated by the court's order.

#### 20 XXVI. ADMINISTRATIVE RECORD

21 107. Upon request by EPA, Respondents must submit to EPA all  
22 documents related to the selection of the response action for  
23 possible inclusion in the administrative record file.

#### 24 XXVII. EFFECTIVE DATE AND COMPUTATION OF TIME

25 108. This Order shall be effective fifteen (15) days after the  
26 Order is signed. Unless otherwise stated in the Order, all times  
27 for performance of ordered activities shall be calculated from this  
28 effective date.

#### 29 XXVIII. OPPORTUNITY TO CONFER

30 109. Respondents may, within ten (10) days after the Order is  
31 signed, request a conference with EPA to discuss this Order.

32 110. The purpose and scope of the conference shall be limited to

1 issues involving the implementation of the response actions  
2 required by this Order and the extent to which Respondents intend  
3 to comply with this Order. This conference is not an evidentiary  
4 hearing, and does not constitute a proceeding to challenge this  
5 Order. It does not give Respondents a right to seek review of this  
6 Order, or to seek resolution of potential liability, and no  
7 official stenographic record of the conference will be made. At  
8 any conference held pursuant to Respondents' request, Respondents  
9 may appear in person or by an attorney or other representative.  
10 111. Requests for a conference must be by telephone followed by  
11 written confirmation mailed that day to the RPM.

12 So Ordered, this 17 day of July, 1996.

13 BY: Mary Lindsay  
14 for Keith A. Takata, Director  
15 Superfund Program  
16 U.S. Environmental Protection Agency

### ATTACHMENT 3

#### Statement of Work for Remedial Action/Construction and Operation & Maintenance McColl Superfund Site

The purpose of this statement of work (SOW) is to set forth the requirements for the remedial action (RA) for the source contingency remedy (RCRA-Equivalent Closure) and the groundwater remedy. These remedial actions are defined in the Records of Decision (ROD) signed on June 30, 1993, and on May 15, 1996, respectively. This SOW is designed to provide the framework for the conduct of the integrated RA and Operations and Maintenance (O&M) activities at the McColl Superfund Site. The SOW provides the framework for technical deliverables and does not include all deliverables required by the UAO.

#### GROUNDWATER DESIGN ACTIVITIES

##### A. Background

EPA and the Respondents agree that integrating the source and groundwater response actions will result in reduced costs and a accelerated completion of the site-wide required construction and O&M. To expedite the groundwater remedial action, the Respondents have initiated the evaluation of groundwater response actions under the previously issued Unilateral Administrative Order No. 93-21, which was initially issued to address both the source design and the groundwater RI/FS. The evaluation of infiltration controls and monitoring requirements are consistent with the groundwater ROD. More specifically, the evaluation includes:

1. Redirection/management of water running onto the site, including;
  - locations of surface water flowing onto the site,
  - expected average volumes and 100 year flood volumes of water flowing onto the site, and
  - how water flowing onto the site will be handled.
2. Lining drainage channels with low permeability materials by evaluating;
  - location of primary and secondary channels at the site,
  - materials proposed for lining channels.
3. Grading areas adjacent to the closure containment system;
  - area proposed for grading to minimize standing water,
  - how grading will fit into the golf course design,
  - a map showing final site contours.

The Respondents shall complete the groundwater portion of the Integrated Remedial Design consistent with EPA guidance and

comments provided to Respondents in the Technical Memoranda required under Order No. 93-21. The Draft Integrated Remedial Design shall include a detailed cost estimate for construction of the groundwater portion of the integrated construction in addition to the following:

1. Purpose, overall objectives and design philosophy for the remedy;
2. Analysis of baseline infiltration rates and incremental reduction of infiltration due to implementation of the remedy; and
3. Detailed figures showing locations of the different components of the remedy.

#### INTEGRATED REMEDIAL ACTION TASKS AND DELIVERABLES

This SOW requires the Respondents to complete the following tasks and to prepare and develop the following draft and final deliverables for EPA review and approval:

Remedial Action/Construction Work Plan - The Respondents shall submit a Remedial Action/Construction Work Plan (RACWP). The RACWP shall form the basis for the approach to the implementation and construction of the Integrated Remedial Action which includes the RCRA closure, postclosure design and groundwater response actions. The RACWP shall include, at a minimum, the following:

- identification of the remedial action team, and an organizational chart, including all contractors, key personnel and description of duties, including the Project Coordinator, the Resident Engineer, the Quality Assurance Team (QAT), the Design Engineer; description of the lines of authority in management of construction activities and contractor roles and relationships to the McColl Site Group (MSG), EPA and the State; and an outline of procedures to resolve misunderstandings, problems or disputes which may arise among the Respondents;
- description of the process that will be used to select and procure subcontractors;
- description of the general scope of remedial activities and a detailed description of major tasks and proposed sequence of major tasks;
- a detailed schedule for remedial action/construction and proposed process to continuously update the schedule; the project schedule shall identify major tasks, task duration, interdependencies, critical path, milestone dates, and key issues that may affect the schedule; detailed description of field construction progress reports and proposed frequency of reporting;



- description of procedures or methods to implement in the field to;
  - prevent nuisance sources,
  - capture, control and/or treat fugitive emissions/odors, and
  - prevent or minimize waste extrusion and exposure during construction activities.
- description of methods to implement Construction Quality Assurance/Quality Control Plan, including composition and qualifications of the independent QAT; procedures for quality control; procedures to collect data to validate completion of project; and requirements for project closeout.

The plans listed below shall be submitted as part of the RACWP. The documents shall be submitted as appendices to the RACWP plan so that they may serve as stand alone guides for field personnel.

A. Residual Management Plan:

The Residual Management Plan shall describe procedures to handle, manage, treat, and/or dispose of residuals generated during construction activities. These residuals may include, but are not limited to, the following: decontamination liquids; segregated wastes; spent PPE; contaminated soils and clay slurries; and, excavation spoils.

B. Site Perimeter and Ambient Air Monitoring Plan:

The Site Perimeter and Ambient Air Monitoring Plan shall set forth the plan for monitoring ambient air for worker health and safety and air along the perimeter of the Site to ensure the general safety of residents consistent with the Community Contingency Plan.

C. Interim Site Security and Maintenance Plan (ISSMP):

The Interim Site Security and Maintenance Plan shall cover all security and maintenance activities from the effective date of the Order until the approval of the Remedial Action Report after which the implementation of the Operations and Maintenance Plan shall be in effect. Some of the necessary activities that shall be included in the ISSMP include weed abatement, seep removal and treatment, security (24 hour guard), fencing repair and periodic inspection of sewage backflow devices. The ISSMP shall list all anticipated activities. The ISSMP may reference previously approved plans however, the plan shall clearly define new activities (e.g., Security or weed abatement).

D. Health and Safety Plan:

The Health and Safety Plan (HSP) shall cover all field construction activities and meet applicable OSHA and EPA requirements (55 Fed. Reg 9294). The EPA may review and recommend modifications to the HSP however, EPA does not approve the HSP. The plan and the quality of implementation is subject to OSHA inspection and review at any time.

E. Community Contingency Plan:

To address potential emergencies during construction that may impact the local community, the Respondents shall, if necessary, recommend modifications to the existing Community Contingency Plan. Recommendations to modify the plan must take into consideration the scope of construction activities and possible release and emergency scenarios, including spill control and countermeasure procedures, perimeter air monitoring and response times, on-site and off-site emergency procedures, and contingencies for a potential air emissions release.

F. Construction Quality Assurance and Quality Control (QA/QC) Plan

The purpose of the Construction QA/QC Plan is to ensure, with a reasonable degree of certainty, that the completed project meets or exceeds all design criteria, plans, and specifications. The plan is to be prepared during the final stages of the remedial design and as a result the final plan deliverable may be modified by the RPM. The plan shall include, at a minimum, the following:

- responsibilities and authorities of all organizations and key personnel involved in the design and construction of the remedy, including a copy of a letter signed by construction contractor which describes the responsibilities and delegates the authorities of the quality control manager;
- names, duties, and qualifications of all proposed quality assurance personnel to demonstrate they possess the training and experience necessary to fulfill their identified responsibilities;
- detailed description of design and performance criteria for the subsurface barrier, cap cover components, and gas collection and treatment system;
- detailed description of all planned QC activities, including manufacturing quality assurance and quality control reviews and inspections, field construction quality control inspections and sampling and test procedures, QA/QC for laboratory testing, and frequency of these activities that will be used to monitor and control construction quality of the subsurface barrier, cap cover, and the gas collection and treatment system;

- methods of performing the quality control inspections, material acceptance and conformance sampling and testing for cap components and subsurface barriers, proposed dates and frequency of the inspections and field sampling, and description of testing procedures;
- control testing and calibration procedures for each specific test, including information which authenticates that personnel and laboratories performing the test are qualified and the equipment and procedures to be used complies with applicable standards;
- the acceptance and rejection criteria for observations, field or laboratory tests, or field inspections, and procedures and plans for implementing corrective measures;
- procedures for scheduling and managing submittal, including those of subcontractors, material manufacturers, off-site and on-site fabricators, suppliers, purchasing agents, earthwork contractors, and installation contractors;
- description of reporting requirements for quality assurance activities, including daily summary reports, inspection and testing reports, schedule of data submissions, inspection data formats and sheets, problem identification and corrective measure reports, evaluation reports, acceptance reports, final documentation and provisions for documentation storage and records access.

Technical guidance to be used in developing the quality assurance program can be found in the following documents: Technical Guidance Document: Construction Quality Assurance for Hazardous Waste Land Disposal Activities, U.S. EPA, October 1986, OSWER Directive 9472.003; Technical Guidance Document: Quality Assurance and Quality Control for Waste Containment Facilities, EPA/600/R-3/182, U.S. EPA, Washington D.C.; and Waste Containment Facilities: Guidance for Construction, Quality Assurance and Quality Control of Liner and Cover Systems, 1995, Authors: D. Daniels, R. Koerner, ASCE Publication No. 40003.

#### G. Community Relations Plan

This document shall encompass community relations for both the Groundwater and the Source and shall define the division of responsibility regarding responding to community concerns. The document shall establish clear guidelines and goals for responding to the variety of concerns that may be expressed by residents.

The LTCRP shall provide a basis for responding to community concerns during O&M. The plan shall include an outline of the information that will be provided to the community to address

ongoing concerns regarding site risks, property transactions and site security in addition to other concerns that may be anticipated. The plan shall clearly establish individuals responsible for communication and identify individuals at local agencies that may require information regarding concerns raised by residents. The plan shall generally outline roles and responsibilities. The plan shall outline the method for informing residents of any important O&M activities (e.g. groundwater monitoring). Advice on the development of the plan shall be solicited from Site property owners such as the Los Coyotes Country Club (LCX Corp.).

#### Operation and Maintenance (O&M) Plan

The O&M Plan shall clearly define the O&M activities required for the Site. The plan should consider historical Site Maintenance tasks. The initial draft of the O&M Plan shall be prepared by the Remedial Design contractor and submitted to EPA for review ninety (90) days after the approval of the RACWP. The O&M plan will include, at a minimum:

- a description of routine operation and maintenance, including a detailed description of all planned normal operation and maintenance activities and the (schedule) for these activities as applicable to: 1) cap cover and subsurface barrier systems; 2) the gas treatment system; 3) groundwater monitoring system; 4) general grounds, vegetation, and facilities maintenance; 5) surface water drainage system; and 6) the site perimeter (e.g., fencing).
- a description of potential operational or functional problems, including an analyses and description of potential operating problems as applicable to 1) the cap cover system; 2) the subsurface barrier; 3) the gas collection and treatment system; and 4) the surface water drainage system. The analyses shall include the sources of information regarding the potential operational or functional problems and common or proposed remedies to be employed to mitigate the problems.
- a description of routine monitoring and laboratory testing, including a description of routine monitoring tasks for the vadose zone, groundwater, and gas treatment efficiency; a description of required laboratory tests and their interpretation; required QA/QC procedures; a schedule of monitoring frequency, and if applicable, when and why these frequencies may be reduced or discontinued.
- a description of alternate O&M procedures, including an analyses of the vulnerability of the cap cover and subsurface barrier systems and additional resources that may

be required should a functional or operational failure occur and the alternate O&M procedures that would be implemented to prevent undue hazard. The plan shall also include procedures to respond to on-site emergencies.

- a description of all major installation equipment for operation and maintenance of the 1) gas collection and gas condensate (and disposal), and the gas treatment systems, and 2) the vadose zone and groundwater monitoring systems. The plan shall include a maintenance and replacement schedule of site equipment and installed components, and monitoring requirements for gas treatment stack emissions, carbon breakthrough, and carbon changeout.
- an estimated annual budget for O&M activities, including all monitoring activities.
- a description of procedures for the maintenance and reporting of site records, including but not limited to: daily operating logs, laboratory records, operating cost records, personnel and maintenance records. Mechanisms for reporting emergencies and submittal of routine monthly/annual O&M and monitoring reports to regulatory agencies shall also be included in the plan.

The following shall be provided as attachments to the O&M plan:

A. Long Term Groundwater Monitoring Plan.

The plan shall include description of sample analytical methods, frequency, well locations and shall include modification to the approved Sample Plan or Quality Assurance Project Plan.

B. Long-Term Site Security, Health and Safety

This document should provide details on how the respondents will ensure Site Security and Safety for workers and potential users of site surface areas.

The plan shall anticipate a range of security measures for the site based on the planned use and access scenarios. The plan shall document how the Respondents are going to monitor security, back-up measures, redundancy measures, inspections and responses to trespassers or breach in the security system.

The plan shall document Health and Safety procedures for O&M site personnel. The plan shall describe the O&M tasks, safety precautions, necessary equipment, protective equipment, etc. The plan should also include contingency tasks in event of a system failure.

EPA guidance to be used for the development of a O&M plan and

cost estimates can be found in the following sources: RCRA Guidance Manual for Subpart G Closure and Post-Closure Care Standards and Subpart H Cost Estimating Requirements, EPA/530-SW-87-010, and in 40 CFR Part 300, "National Oil and Hazardous Substances Pollution Contingency Plan" (1990).

#### Remedial Action Report

A Remedial Action Report shall be prepared after final inspection. This report shall include, at a minimum,

- a synopsis of the work defined in the EPA approved final design documents and RACWP and certification by the design and resident engineers that this work was performed;
- explanations of any modifications to work in the EPA-approved final design documents and remedial action workplan and why these were necessary for the project;
- description of outstanding construction items, if any, from the prefinal inspection and an indication that the items were resolved;
- certification by the design and resident engineers and quality control manager that the remedy is functional;
- documentation (data) substantiating that performance standards have been met;
- "Record Drawings" (changes to original design drawings or "as-built" drawings).

#### Five Year Review Report

The Respondents shall submit to EPA a Five Year Review Report. The Five Year Review Report shall be consistent with EPA Directive 9355.7-02 (May 23, 1991). The Five Year Review shall include, at a minimum, the following sections: Site Summary (description of site history, remedies and O&M requirements); Remedial Objectives; ARAR's Review; Site Inspection; Areas of Noncompliance; Statement of Protectiveness; Next Review; and Implementation Requirements.

#### ATTACHMENT 4

##### Schedule and List of Deliverables

The following is a list of deliverables and dates due to EPA, in accordance with the Order. This list is for reference. Additional documents may be required based on field activities and other contingencies at the Site. EPA may extend the due date for a given document without amending the Order.

| <u>Number</u> | <u>Deliverable</u>                      | <u>Date Due</u>   |
|---------------|---|---|
| RA-1          | Notice of Intent to Comply              | 5 days after effective date of Order                    |
| RA-2          | PRP Project Coordinator                 | 5 days after effective date of Order                    |
| RA-3          | RA/Construction Work Plan               | 30 days after effective date of Order                   |
| RA-4          | Contractor Designation                  | 10 days after selection                                 |
| RA-5          | O&M Work Plan                           | 90 days after approval of the RA/Construction Work Plan |
| RA-6          | RA Construction Notice                  | 30 days after construction completion                   |
| RA-8          | Site Access Agreements                  | 60 days after effective date of Order                   |
| RA-9          | Records Preservation Notice             | 30 days after effective date of Order                   |
| RA-10         | Financial Assurance                     | 30 days after effective date                            |
| RA-11         | Contractor Insurance or Indemnification | 7 days prior to initiation of field activities          |
| RA-7          | RA Report                               | within 90 days of the pre-certification inspection      |
| RA-12         | 5 Year Review                           | within 5 years of approval of the RA Report             |